

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
24 June 2004 (24.06.2004)

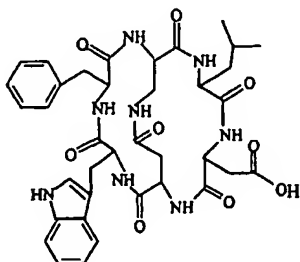
PCT

(10) International Publication Number  
**WO 2004/052923 A2**

- (51) International Patent Classification<sup>7</sup>: C07K 7/56, 1/02, 1/06, 1/113, 7/22
- (74) Agent: GERVASI, Gemma; Notarbartolo & Gervasi S.p.A., Corso di Porta Vittoria, 9, I-20122 Milan (IT).
- (21) International Application Number: PCT/EP2003/013696
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 4 December 2003 (04.12.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: FI2002A000239 6 December 2002 (06.12.2002) IT
- (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicant (*for all designated States except US*): MENARINI RICERCHE S.P.A. [IT/IT]; Via Tito Speri, 10, I-00040 Pomezia (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): SALIMBENI, Aldo [IT/IT]; Via Gaetano Strambio, 11, I-20133 Milan (IT). POMA, Davide [IT/IT]; Via Martiri di Cefalonia, 2, I-20059 Vimercate (IT). TUROZZI, Damiano [IT/IT]; Via Alegosa, 2, I-20029 Turbigo (IT). MANZINI, Stefano [IT/IT]; Via della Mattonaia, 25, I-50121 Firenze (IT). MAGGI, Carlo, Alberto [IT/IT]; Via L. Michelazzi, 43, I-50141 Firenze (IT).
- Declaration under Rule 4.17:**  
— of inventorship (Rule 4.17(iv)) for US only
- Published:**  
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: PROCESS FOR THE PREPARATION OF BICYCLIC PEPTIDE COMPOUNDS

Cyclo(Asp(OH)-Asp-Trp-Phe-Dpr-Leu)



(I)

(57) Abstract: The present invention relates to a new process carried out entirely in solution, for the preparation in high yields of high purity bicyclic peptide compounds of formula (I), useful as intermediates for preparing compounds with pharmacological activity.